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ABSTRACT

Policy implementation in organizations has been described in the literature as a process of adaptation. A study was performed to investigate three basic linkages specified in the traditional rational adaptation paradigm during the implementation of a new budget structure in a multicampus community college district. Loose coupling between elements of the paradigm was found to be a dominant feature of the process, suggesting the implementation is perhaps best described as more intentionally (than actually) rationally adaptive. The research raises the question that intervention strategies of a different order may be necessary to effect future educational change. (Author)

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POLICY IMPLEMENTATION AS A LOOSELY-COUPLED ORGANIZATIONAL ADAPTATION PROCESS

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INTRODUCTION

Policy implementation has emerged recently as a separate focus of research. Interest in the process has been generated primarily by the conspicuous failure of several major federal reform attempts and the appearance of research results that have cast doubt on traditional assumptions and much of the conventional wisdom about innovation and change.

Background. A growing number of investigators have demonstrated that the pronouncement of a policy or the adoption of an innovation does not insure that a desired change will occur (Gross, Giacquinta and Bernstein, 1971; Pressman and Wildavsky, 1973; Rogers and Eveland, 1973; McLaughlin and Berman, 1975; Berman and McLaughlin, 1975, 1976; Levinson, 1976; McLaughlin, 1976 a,b; Sandell, 1976). Others have noted the presence of considerable change activity amidst stasis (Mayhew, 1967; National Institute of Education, 1973); the "litany of broken promises" associated with governmental reform activities (Seidl, 1975); and the appearance of an "implementation gap" (Schultz and Slevin, 1975). One important summary finding of the research thus far is that the implementation process itself--rather than policy features, project characteristics, or funding level--seems to account for the amount and

direction of change observed, and dominates the process of innovation (Pressman and Wildavsky, 1973; Berman and McLaughlin, 1976, etc.).

Researchers also have raised significant doubts about the efficacy of a so-called "change agent" strategy based on an assumption that resistance to change is the chief obstacle to be overcome in implementation. Weiner (1972), Derthick (1972), Pressman and Wildavsky (1973), and others were unable to impute the unsuccessful implementation (in terms of initial aspirations) of the policies they studied to any resistance on the part of organizational participants. Gross, Giacquinta, and Bernstein (1971), Lucas (1975), and Vertinsky, Barth, and Mitchell (1975) all found evidence to suggest that resistance, rather than being an antecedent condition of innovation, was actually engendered in initially supportive participants by the process of change, and even then had little explanatory power in terms of final outcomes. Berman and McLaughlin (1976, p. 362) encountered projects undermined by resistance but discounted its importance since they also found that implementation was as difficult to manage in indifferent settings as in hostile ones. The combination of a lack of evidence supporting the phenomenon and its recent documentation as a relatively minor dependent variable in the implementation process paradigm would thus appear to significantly undermine the validity of "resistance to change" as an important explanatory concept.

Third, most recent research is in agreement that policy implementation is a highly contextual process, typically occurring in complex organizational settings (Randall, 1971; Weiner, 1972; Rogers and Eveland, 1973; Pressman and Wildavsky, 1973; Gibson, 1975; Schultz and Slevin, 1975; Berman and McLaughlin, 1976; Peterson, 1976). Berman and McLaughlin (1976, p. 361) note, for example, "An innovation's local institutional

setting has the major influence on its prospects for effective implementation /and influences the way the process works/." Elsewhere, they have indicated that implementation is "an inherently local process" governed by the micro-structures and processes of the local setting (McLaughlin and Berman, 1975).

Fourth, although few have studied it explicitly as such, most investigators have concluded that implementation is essentially a complex organizational decision process (e.g., Pressman and Wildavsky, 1973; Seidl, 1975, p. 8; McLaughlin and Berman, 1975, p. 6; Levinson, 1976, p. 3; McLaughlin, 1976a, p. 343, et.al.). These investigators and others also have recognized the close connection between the processes of choice and learning within implementation (Greenfield, 1973, p. 559; Churchman, 1975; McLaughlin, 1976a, p. 345).

Finally, researchers have described implementation as a process of adaptation. Emphasis has been given either to the bi-directional features of the process or its more uni-directional characteristics. Adaptation as a bi-directional, interactive process has been discussed in terms of "reciprocal interaction" by Pressman and Wildavsky (1973), and in terms of "mutual adaptation" by McLaughlin (1976a) and Berman and McLaughlin (1976, etc.). Reciprocal interaction describes a process dependent on multiple interacting components and clearance points. In the case of mutual adaptation, both the innovation and local environment adapt to each other during implementation. Implementation as a one-way adaptation process has been investigated by Allison (1971), Randall (1971), and Berman and McLaughlin (1976). The latter isolated or hypothesized processes of: "cooptation," where the innovation adapted to its organizational setting; "technological learning," where the setting adapted

wholly to the innovation; and "nonimplementation," where adaptation did not occur.[1] In the case of both bi-directional and uni-directional adaptation phenomena, organizations are portrayed as rationally responsive organisms.

THE STUDY

Theoretical Framework

The description of implementation as a complex, organizational process of adaptation occurring within a context of choice suggests the need for further investigation of the phenomenon in terms familiar within organizational theory, and especially classical behavioral decision theory. In this tradition, organizational adaptive change occurs in a process of rational choice (Cyert and March, 1963).

The Rational Adaptation Paradigm. The rational adaptation process has been summarized recently in terms of a "complete cycle of choice" (March and Olsen, 1976).

In the complete cycle, individual and organizational behavior proceeds in the following way: participants observe various conditions or initiatives within the environment; they arrive at certain beliefs about their organization's behavior vis-a-vis the environment; they initiate individual behavior which is aggregated into organizational action (changes in goals, attention rules, or search processes) and choices; to which, the environment reacts, thus initiating a new round of the cycle (Cyert and March, 1963, as summarized by March and Olsen,

1976, p. 13). Rephrased approximately in terms of the policy innovation process: local organizational participants notice innovative opportunities offered through governmental initiative; they raise their aspiration levels accordingly after calculating the value of the innovation for their local setting; and, after making some small attempts to insure that something better or closer at hand doesn't already exist, they adopt the innovation and allocate staff to it until it is installed; they then look to their local and policy environments for reactions and, depending on the direction and amount of reinforcement (through evaluation and/or notoriety), take the next step toward or away from an innovative posture.

Implementation "Anomalies." The paradigm is descriptively useful. It helps to guide our understanding of a complex process. However, implementation researchers have noticed certain phenomena that are not well integrated in the traditional rational adaptation paradigm described by the complete cycle of choice. The data suggest that, although adaptation has occurred, the process has not been as rational as the theory describes it. The evidence appears to indicate that the linkages in the complete cycle have been loosened considerably. Most of these recent observations have appeared in the work of Berman and McLaughlin, based on their Rand Change Agent Study.[2] Other researchers, however, also have noted similar phenomena in isolated studies (as cited below).

Three key sets of observations have been made. First, it has been noted that innovations seldom are implemented as planned. Innovations "mutate" during implementation and the process typically is characterized by unanticipated events and outcomes (Dolbeare and Davis, 1968; Carlson,

et.al., 1965; Gross, Giacquinta, and Bernstein, 1971; Gibson, 1975; Levinson, 1976; Berman and McLaughlin, 1976, etc.). Second, the application of identical innovations within outwardly identical organizations has led to different implementation scenarios and ultimate outcomes (Berman and McLaughlin, 1976; McLaughlin, 1976a; Sandell, 1976). Berman and McLaughlin (1976), for example, observed that the same program innovation was implemented with dramatically different results in four schools having comparable and student staff characteristics (p. 357). They note (p. 360), "Each project employed its own combination of strategic choices that defined in effect its particular implementation strategy." Third, it has been noticed that different implementation approaches and change management strategies often yield similar results (Stephens, 1967; Berman and McLaughlin, 1976). Berman and McLaughlin (1976, p. 363), analyzing the fidelity of implementation, perceived project success, teacher change, and expected project continuation, for example, observed that "...federal change agent programs had approximately equal effect on project outcomes, despite their different management strategies."

These findings point to a basic disjunction between policy and process, and between process and outcome. The evidence suggests that implementation may be a rather loosely-coupled adaptation process and that an appropriate research paradigm would be one that relaxes some of the assumptions associated with the complete cycle of choice.

Loose-coupling. A recent concept appearing in the literature of organizations is that of "loose-coupling" (March and Olsen, 1975; March and Olsen, 1976; Weick, 1976). The imagery of loose coupling is meant to convey the degree to which ambiguity is a significant component of

the complexity of reality (March and Olsen, 1976) and the degree to which linked phenomena often preserve a physical, logical, or temporal separateness (Weick, 1976).

Ambiguity has been mentioned in passing by several researchers examining implementation phenomena (Gross, Giacquinta, and Bernstein, 1971; Levinson, 1976; McLaughlin, 1976a). McLaughlin (1976a, p. 342-3) notes, for example, that the classroom projects studied by Rand typically possessed none of the features considered essential by Rogers and Shoemaker (1971) in their well-known study of innovation: ease of explanation, possibility of partial trial, simplicity of use, value congruence, and obvious superiority over past practices. Rarely, however, has ambiguity been given any significant theoretical treatment within an explanatory framework (an exception is Weiner, 1972).

March and Olsen (1976) have suggested that the basic rational adaptation paradigm underlying the complete cycle of choice needs to be modified in order to account for four ambiguities commonly encountered: the ambiguity of history (Allison, 1971), the ambiguity of intention (Deutscher, 1974; Liska, 1975), the ambiguity of organization (Cohen, March and Olsen, 1972), and the ambiguity of understanding (March and Olsen, 1975). It is argued that these ambiguities substantially weaken the linkages in the cycle and complicate the process of choice and our understanding of it in terms of adaptive rationality. They suggest that the process of adaptation should be viewed as only intendedly (instead of actually) rationally adaptive, and argue the necessity for closely examining the elements and micro-relationships within the complete cycle of choice.

The theory of loosely-coupled adaptation suggests an explanation for the implementation "anomalies" noted above, and prompts further inquiry into the linkages of elements in the adaptation paradigm.

Focus and Purpose of the Research

A study of policy implementation in a complex organization was undertaken in which the focus of research was the major elements in the basic organizational adaptation paradigm (Cyert and March, 1963) and their relationship within the complete cycle of choice. Although several types of decoupling phenomena might be prevalent and ultimately important to implementation (Weick, 1976, suggests 15 different potential types in organizations), only three key linkages were investigated: the relationship between policy and the local interpretation of policy, the relationship between interpretations and individual participation patterns, and the relationship between individual participation and implementation outcomes.

The purpose of the analysis was to test the assumption of loose coupling and to develop a more complete understanding of organizational implementation behavior in light of an adaptation perspective. The research was based on the assumption that future policy and organizational intervention strategies, in order to effectively promote educational renewal, must be grounded in some understanding of what the basic process of change actually is like.

Data Source

The following data sources were employed.

Policy. The policy studied was a mandate issued by the Board of Governors of a major community college system to implement statewide a new standardized budget and accounting system. The policy was issued formally in December 1971 for initial implementation by July 1, 1974.[3]

The Setting. The local organization studied was one of 70 community college districts to which the policy was directed. The local organization's

complexity was demonstrable. The district was organized into a five-campus structure employing over 1000 professionals and serving 30,000 students in six counties with a budget exceeding $30 million.

Methodology

Background. According to the originators of the concept as applied to organizations, loose coupling can be observed and analyzed only when methodologies that preserve the rich, contextual detail of organizational processes are employed (March and Olsen, 1976). A few discussions of appropriate methodologies for studying the phenomenon of loose-coupling are to be found in the literature (e.g., Deutscher, 1973, Liska, 1974, 1975). A summarization of some "methodological traps" can be found in Weick (1976), who has warned that the appearance of loose coupling may be no more than bad methodology (p. 9). Although inexplicit about other forms of potential loose coupling, Weick describes some of the difficulties associated with analyzing the relationship between belief and behavior. One trap involves mismatching goals and actions due to the failure of the research to capture all goals and all (or most significant) actions (Weick, 1976, p. 10). A second trap arises in the case of multiple intentions which logically can determine multiple actions, thus making it difficult, if not impossible, to properly associate any given intention with any given action, or to know which relationships are "indeterminant" (Weick, 1976, p. 15). Elsewhere, he cautions against utilizing context-independent attitude measures to predict context-dependent behaviors, (Weick, 1976, p. 9).

The methodologies described below were designed to avoid these potential pitfalls as much as possible. First, a major effort was made

to preserve the context, complexity, and variety of behavior of the process rather than preselect data elements or partition the observed behavior into more easily studied, but disjointed, fragments of the whole. The assumption was made that a simple independent-dependent variable approach would miss most of the dynamics considered important within the adaptation paradigm.[4] Second, although it would be foolish to suggest that every goal and every action of significance could be captured for an organization during a given implementation period, an attempt was made to capture all of those related to or having either a direct or indirect impact on the innovation studied.

Third, in the case of the problem of multiple intentions determinant of multiple actions, and context-independent attitudes determinant of context-dependent behaviors, an attempt was made to specify mutually exclusive, concrete, organizational goals in terms of time, thus forcing a context-relevant prioritization of intentions.

Instruments. The theoretical framework above specifies three foci for analysis: the policy--interpretations linkage; the interpretations—individual participation linkage; and, the individual participation—organizational response linkage. The three linkages indicated the need for data focusing on the cognitions and beliefs of individual participants vis-a-vis the policy (interpretations), the individual and time patterns of behavior during implementation (attention), and the process of organizational choice shaping implementation outcomes (response).

Interpretations were studied by means of three data collection strategies: a content analysis of language usage and patterns found in over 190 documents constituting the "organizational memory" of the

implementation process; a combination of structured and unstructured interviews with the universe of twenty-four top and middle-level managers within the local organization (several were interviewed more than once);[5] and, a brief questionnaire administered to 19 top and middle-level managers on three occasions during the process. The questionnaire requested an enumeration of the "five most important issues in the district today" and a rank ordering of selections through assignment of 100 units of time according to "how you believe the district should allocate its time to these issues." Forty-four questionnaires were returned for a 77 percent response rate over all three administrations.

Attention allocation behavior during implementation was traced by means of an unstructured diary approach and direct observation. The same 19 administrators completing questionnaires were requested to maintain (with the help of their secretaries) time allocation logs on three separate occasions during implementation, for a total of seven days each. Three categories of time were recorded: activity time, topic time, and contact time. One outright refusal was received and not all participants completed diaries on all study days. One-hundred usable logs were received representing 100 of 126 potential administrator-days in all, for a response rate of 79 percent. For final presentation, the data were weighted for under-represented administrator groups in order to approximate the actual time distribution for all categories.

In addition, a topic-time allocation record of the top administrative group in the organization was maintained based on direct observation during a critical four-month period during implementation, and a similar record was maintained during the final eight months of the process,

utilizing the same method, for the administrative group most directly involved in implementation details.

The overall process of choice relating to policy implementation was isolated in a comprehensive case study of the process which drew on all of the data sources described above. The micro-events of the implementation scenario were followed and recorded during the final 15 months prior to the policy-specified deadline.

Data Collection Procedures. The selection of dates for time sampling and questionnaires was non-random. Date selection was based on the significance of events as they unfolded. The primary criteria employed were: to coincide data collection with significant events during implementation; to hold data collection to three separate occasions; and, to space the samplings sufficiently so that the cooperation of study participants could be maintained. This strategy led to administrations of the two instruments in November, February, and June of the final implementation year.[6]

RESULTS

Policy--Interpretations Linkage

In the classical adaptation tradition, individuals see what is to be seen in their environment. They form interpretations and beliefs about the purposes, importance, and other aspects of the activity or thing seen that are isomorphs of an observed reality. In order to

examine the relationship, local participants were interviewed about their understanding of the policy; language patterns found in state-level and local organizational documents pertaining to the project were isolated; and, three rounds of questionnaires were distributed, soliciting an estimate of the project's importance vis-a-vis other local issues.

Policy Ambiguity. The initial stimulus for change was promulgated officially in December 1971. It was adopted unanimously by the state Board of Governors and sent to all community college districts under the title "Statement of Policy on Community College Program Budgeting." The formal policy was preceded by three memoranda from the state Chancellor's office that laid the groundwork.

A content analysis of the policy statement and preliminary documents received at the district revealed four descriptive purpose clusters. These fell under the rubrics: program planning and budgeting; management/fiscal information development; function budgeting and accounting; and, standardized report/reporting.

These four vaguely-related purposes associated with the policy were made more opaque by several apparent contradictions within the documents themselves. For example, according to the statement (on "program budgeting") "Adoption of concepts of program budgeting would make better information available...when making decisions regarding the allocation of available resources to operate Community Colleges." Later, however, the caveat appeared that the project was only "a step toward program budgeting /and would/ not result automatically in program budgeting."

Elsewhere, it was indicated, "The objective is to develop improved Community College financial data organization and reporting procedures....

Our major concern is that information be reported in comparable fashion by each district." The policy also stated, "One budgeting and accounting system will not be prescribed for the varying local needs of each district. Rather, each district should develop that system most useful for its own purposes." Also to be found, however, was the statement, "There is need for uniformity in fiscal information.... Adoption of a function-oriented structure would have each district use a common classification structure...."

What was the policy designed to accomplish? Was the project a baseline effort by which educational outcomes later would be measured? Was the effort intended chiefly to improve management information for local decision making? Was the project designed primarily to standardize the accounting and reporting system statewide? Was it a "first step" toward attempting to quantify education output? What specific minimum things was the local district being asked to do? What specific operational changes would be required locally in order to fulfill the project requirements? These major uncertainties, and other questions, attended efforts locally to interpret the board of governors' policy.

Interviews revealed a multiplicity of viewpoints and understandings about the state project. Different administrators tended to see different purposes, opportunities, and requirements in the policy. Instructional deans saw the policy as merely a symbolic gesture by the state to appear accountable to the legislature and thought that relatively little would be changed. The Controller perceived the policy to be an opportunity to improve in-house fiscal procedures by automating the general ledger and accounts payable. The Internal Auditor was sure the state guidelines specified an accrual accounting requirement. (They didn't.) The District

Business Manager and Vice Chancellor, Business saw the policy as chiefly a stimulus to improve district level management information systems. The Director of Fiscal Services constantly referred to the project as a "PPBS" but saw it primarily as a new reporting requirement. The college Business Managers were generally delighted by the policy and saw it vaguely as a combination of all four purposes and a panacea for all that was wrong with community college management.

No-one interviewed expressed resistance to the policy. But no-one interviewed was very sure of what had to be done or by when, to meet the deadline specified by the state; no-one was very clear about whether the deadline was "hard" or "soft." By all indications, the policy was an ambiguous intervention in a receptive local environment, uncertain about what to believe.[7]

Local Simplification. The case study data revealed that, although the array of goals outlined or implied in early policy documents was large, and different administrators tended to see different component purposes and requirements, district officials spoke and wrote about the policy in terms of a few imprecise, but grand, simplifications. The primary simplification utilized by local participants in early communications about the policy was "PPBS." This particular rubric cropped up in both interviews, documents, and meetings locally regarding the state project from late 1971 to about mid-December 1973. The umbrella term "PPBS" appeared to serve the important function of permitting those with differing individual perceptions to communicate with each other about the policy during the period of highest ambiguity. Thus, it became possible to interpret the policy in a fashion acceptable to

all without having to identify its requirements in concrete operational terms.

The use of "PPBS" as the primary policy referent during much of the implementation period also appeared to be related to at least two other factors. The term "PPBS" had been used during the exploratory work done by the state junior college association and the district studied had participated in this earlier phase of the project. Thus, district personnel long had associated "PPBS" with almost anything having to do with state-level reform of local budget and accounting or state reporting formats.

In addition to historical connotations, however, the timing of related events seemed to have an impact on the use of PPBS as a persistent policy descriptor. As mentioned, district personnel were involved outside the district in an early PPBS feasibility study and had worked on an ad hoc committee on budget and accounting reform tied to the idea of PPBS before that. The district also was a founding member of the League for Innovation in the Community College whose first major effort was associated with the concepts and terminology of program budgeting. The local district served as host for the League's first significant regional conference which examined the applicability of program budgeting within the community college environment. This activity was interspersed with two "PPBS memoranda" from the state staff preliminary to the actual policy issuance by the state board, and the policy itself came within four weeks of the League PPBS conference.

The combination of historical PPBS-related activity, going back at least two years prior to the policy, and the order and timing of subsequent events immediately prior to the policy, emerged as powerful

joint effects in fixing PPBS as a meaningful and useful umbrella concept.

Policy Mutation. Policy ambiguity attenuated during the project as global, vague policy language gave way to more concrete, precise descriptions. An analysis of language patterns found in fourteen state-level documents revealed that the early descriptive clusters referring broadly to the project in terms of program budgeting and management/fiscal information no longer were used by the state approximately eight months after the initial policy statement, and narrower operational language, referring to accounting and reporting, were used almost exclusively thereafter (Table 1).

Table 1

Frequency of Selected Language Clusters Appearing in 14 State-level Documents Prior to and After August, 1972

Cluster	Usage Before August 1972	Usage After August 1972	Total Usage
Program Planning and Budgeting (PPBS)	34	1	35
Management/Fiscal Information (MIS/FIS)	18	0	18
Reporting	52	44	96
Function budgeting and Accounting	31	44	75
Ledger	0	3	3
Distribution of all Documents	5	9	14

The shift appeared to be related both to political and learning factors. Events in the state legislature during 1972 made attachment to PPBS ideas unadvisable. In addition, however, the state staff, acting as "change agents" in pilot districts during the first seven months of implementation (the organization studied was a pilot district) had discovered the considerable amount of ambiguity created by the initial policy documents and tried to take steps to clarify, in more operational terms, and with new inputs from the districts, the purposes and requirements of the project.

Delayed Local Mutation. Descriptive language used locally during implementation eventually mirrored the changes in patterns found in state documents, but this occurred only after a considerable delay and only when the presence of the deadline began to be felt locally. Language usage data for the district revealed persistence in the utilization of global policy referents such as "PPBS" and "MIS/FIS" long after discontinuance at the state level. Figure I displays an "Organizational Memorygram" for the district indicating longitudinal frequency distributions for the same five language clusters reported for state documents in Table 1.[9]

Table 2 presents the same information in a different format. The data are organized around a significant turning point in implementation at the district--the point at which the deadline began to exert an influence locally. District representatives who attended a state-sponsored workshop on implementation had returned with the news that the deadline was "for real," and that even non-pilot districts would be expected to adhere, on time, to the guidelines.

Figure 1. Frequency of Selected Language
Appearing in 173 District Documents
Between December 1971 and July 1974

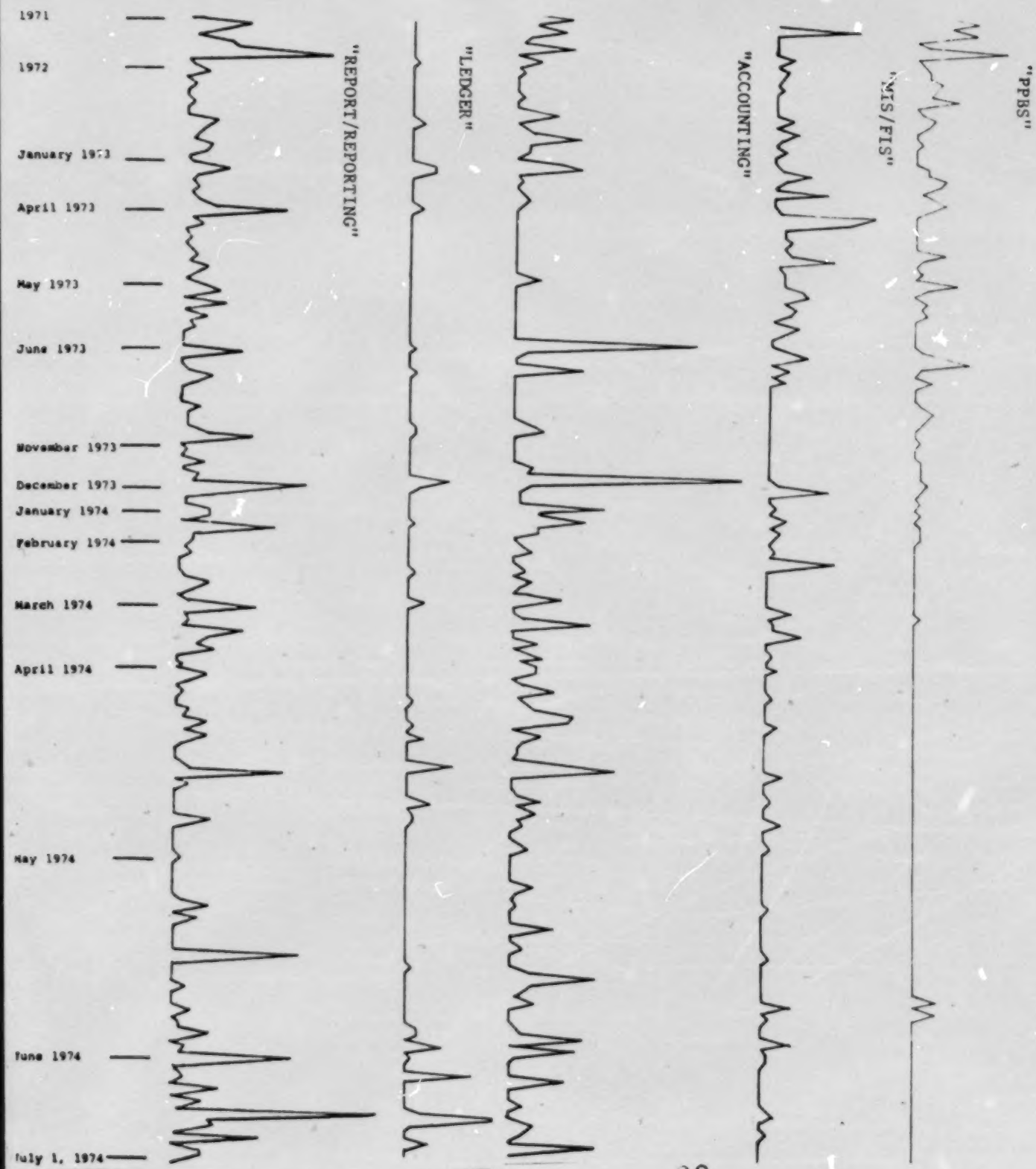

Table 2

Frequency of Selected Language Appearing in 173 District Documents Prior to and After December 1, 1973

Cluster	Usage Before December 1, 1973	Usage After December 1, 1973	Total Usage
Program Planning and Budgeting (PPBS)	113	14	127
Management/Fiscal Information (MIS/FIS)	142	64	206
Reporting	163	307	468
Function Budgeting and Accounting	189	419	608
Ledger	23	74	97
Distribution of all Documents	67	106	173

The data summarized in Figure 1 and Table 2 point to a generally responsive--but considerably delayed--mutation in policy interpretation at the district level. The primary shift in language patterns locally did not occur until nearly 16 months after the primary shift at the state level.

Interpretations--Individual Participation Linkage

Despite the ambiguity surrounding interpretation (or perhaps because of it), the state policy mandate emerged as an important consideration for district participants within a context of ongoing local issues. Table 3 displays rankings for the ten most important district issues from among 22 different ones mentioned by participants during the final eight months of policy implementation. As indicated, the state mandate ranked fourth and third respectively during November and February, then dropped to ninth place in June, prior to the deadline.[9] Thus, in general terms,

and especially during the November - February timeframe, the policy achieved notice locally and was assigned a relatively high degree of importance.

Table 3

Rankings of Ten Important District Issues During Final Eight Months of Implementation

	November (N=17)	February (N=11)	June (N=16)
Education Master Plan	1	1	1
Enrollment Crisis	2	2	5
District Governance	3	7*	2
State "Mandate"	4	3	9
Affirmative Action	5	4	11
Teaching Load Policy	6	5	6
Personnel Policies	8	11	7
District Campus Configuration	9	9	8
Part-time faculty	10	7*	3
Need for MIS/FIS	11	8	4

*Tie.

These priority sets for the district were compared ordinally with the actual attention distribution among issues for all officers. The results, displayed in Table 4, indicate that the correlation between issue prioritization and precedence of actual time expenditures on issues was low overall.

Further evidence reinforces the apparent disjunction between belief and individual action suggested by these results. An analysis of district

time patterns during implementation revealed two types of bias that mitigated against closer connections between participant time priorities and actual attention allocation.

Table 4

Correlation Coefficient Matrix of Tau/Rho for Important Issues and Time Allocated to Important Issues by District Officers*

	Time Priority			
	November	February	June	Summary
November	.096+ / .116			
February	.095 / .116	.248 / .406		
June	.257 / .401	.375 / .573	-.600 / -.800	
Summary	-.034 / -.019	.246 / .416	-.333 / -.486	.134 / .259

*With pairwise deletion + Tau / Rho

Context Bias. As indicated above in Table 3, the state policy, however dimly seen, was given significance locally. But it was only one of 22 important issues mentioned by district officers in questionnaire responses, and only one of over 60 total topics mentioned in the time allocation logs maintained by administrators during the study.

Due to the method of selecting study days to coincide with significant implementation events, it was expected that a substantial proportion of the total time expended would have been consumed by attention to the state policy. This however, did not occur. Some officers spent more time than others, but in no case did the proportion of total time expended

on the policy during study days exceed 10 percent for any one group; and, for the district as a whole, the proportion of total time allocated was only 3.9 percent.

The time logs revealed quite clearly that the largest amounts of time spent on implementation were reported by groups with fewer competing demands and hence less fragmented time patterns overall, thus suggesting a context-regulated flow of attention.

Also significant was the finding that the attention given by local participants to all 22 named issues combined amounted to less than one-fifth of the total time expended by the organization on all topics isolated in the logs. Specifically, only 17.3 percent of total time was given to all issues mentioned as important in questionnaires and the remaining time went to 38 other topics appearing in the logs. An analysis of attention in this "residual" category suggested another type of bias affecting implementation.

Maintenance Bias. The major competition for the time of local participants did not come from so-called important issues. It came from "everything else" associated with maintaining the organization: budgeting; hiring, classifying, and evaluating employees; scheduling classes or future meetings; traveling to and from regularly scheduled "staff" meetings; attending "crisis" meetings on almost any topic; ordering supplies and equipment; grant writing; and so on. The time logs revealed an organization heavily involved in minding the shop--not one turning the bulk of its available attention to key issues (Table 5).

Table 5

Distribution of Attention by All Peralta Officers During November, February, and June

Issue Topics	November	February	June
Educational Master Plan	0.0	2.0	0.1
District Governance	0.6	4.0	0.1
Enrollment Crisis	2.0	4.8	1.0
State "PPBS" Policy	3.5	4.8	2.4
All Other Issues	7.0	8.4	0.8
Sub-total	13.1	24.0	4.4
Maintenance Topics			
Personal	3.5	5.3	5.4
All Budget	6.3	7.9	26.1
All Personnel	14.7	16.5	11.1
Curriculum Scheduling	7.1	1.7	9.2
Facilities, Supplies, Equipment	3.5	3.4	2.9
Routine Office Items	5.4	5.3	5.9
Other College Ed. Admin.	3.8	2.3	1.6
Other College Bus. Admin.	4.8	6.1	2.6
General Conversation	5.1	4.8	4.5
All Other Maintenance Items	11.6	12.9	15.4
Sub-total	78.6	66.2	84.7
Unknown	8.3	9.8	10.9
	100.0	100.0	100.0

Individual Participation--Organizational Response Linkage

In the basic rational adaptation paradigm, individual participation affects organizational outcomes. Outcomes derive from choices which are a direct consequence of process (March and Olsen, 1976, p. 15-16).

The process of implementing the state policy only approximated this assumed linkage. The connection was loosened considerably by several phenomena isolated in the case study.

Inconsequential Search. Four major periods of activity in search of technology appropriate to implementing the state policy proved irrelevant to the final actions taken to meet the state's deadline. In two cases, the technology found proved unworkable in the local context, and was rejected by formal agreement, but in two other cases, viable solutions were abandoned without clear rejection as commitment waned or other events (e.g., the budget process) intervened.

Inconsequential Planning. A project team, supported by an outside consultant, was formed in the final months before the deadline and labored to produce a project plan that would insure that the district met the basic policy requirements and also improved internal district management, data processing, and accounting procedures. Large sums of money were spent. The recommendations of the plan, however, were not acted upon by top management and there was evidence indicating that the report was ignored.

Policy requirements were met primarily through a haphazard patching of pertinent computer programs in the final weeks prior to the deadline, and by manually assembling the first report for the state office. Final substantive outcomes thus stood in sharp contrast to the preceeding twenty-four months of activity by college business managers, district officials,

the project managers, and consultant who had expended enormous amounts of time in looking for a way to improve district systems as well as meet state expectations.

Problematic Access. Simple aggregation of individual effort into organizational choices was precluded by rules governing the participation rights of certain groups at various stages of implementation. District members who spent the largest amounts of time, and thus had the greatest amount of expertise and information regarding the policy, typically were either not allowed or not required to participate in contexts in which key decisions might have been (but weren't) made. For example, much of the expertise developed at the college business manager and district fiscal staff levels never was shared at the top administrative council level due to the limited access to this body by lower level managers. An upward delegation or "linking pin" structure that might have substituted for direct access, although in place, simply did not function well due to a number of factors, including: absences at meetings at both levels by the "link pin" due to other competing events; political and technical incompetence at all levels; and differing senses of urgency regarding the policy in the face of local issues carrying more immediate deadline requirements.

Fluid Participation. The potential for direct aggregation of individual actions into organizational outcomes also was seriously weakened by the high degree of variation in involvement during the process. Participants came and went; those present for one discussion or agreement often were not present for the next one; attention was highly fluid and subject to the pressures of competing obligations and participation opportunities elsewhere in the organization. Examples of this phenomenon were numerous:

Staff members at one of the colleges involved in the early feasibility study conducted by the state were involved little in the later implementation process after the policy was issued; college business managers, who were heavily involved during an early stage dropped out of the picture completely when a project team was formed later; the Chancellor and Vice Chancellor for Educational Services both appeared briefly at the time of selection of the project manager late in the process but never met with the project manager or project team; the consultant, who had considerable impact on planning appeared only during the last five months of implementation; the project manager was not associated in any way with the project until his selection six months before the deadline; the only two district officers who did participate during the full life of the process (the Controller and Director of Fiscal Services) were heavily involved in budget preparation each spring and could allocate little time during March, April, and May; one participant who was heavily involved, and had influenced implementation during the first year, retired. Thus, from both a short and long-range perspective, participation in implementation was variable. These patterns could be studied in themselves but basically resulted from changing enthusiasms, changes in the perceived degree of urgency concerning implementation, competing time pressures, and competing opportunities (including exit opportunities) within the organization.

DISCUSSION

Summary of Findings

In general, the data support a view of policy implementation as a loosely-coupled organizational adaptation process.

Multiple ambiguities associated with the policy, an historical bias in the organization toward program budgeting, and the timing of the policy statement vis-a-vis other local events, decoupled policy intent and local interpretations. The persistent interpretation of the policy as a PPBS requirement stood in contrast to state efforts to point out in writing and verbally that the project was not a PPBS effort. Although the state staff ceased using PPBS terminology early on, in favor of more descriptive, operational language, the PPBS label persisted locally for sixteen additional months until deadline pressures began to be felt approximately six months before the first record-keeping and state reporting was due. An interpretation of the policy as a PPBS appeared to be necessary in order to accommodate the multiple interpretations and hopes for change held by local participants.

The policy ranked high in importance relative to other local issues, but appeared in a time allocation study of top, middle, and lower executives to have no normatively legitimate claim on time similar to that of duty and routine business associated with organizational maintenance. Issues,

in general, were under-attended relative to maintenance topics. During implementation, the policy appeared to receive the greatest share of time from participants who had fewer competing time demands and less access to other decision arenas, thus indicating the impact of non-rational, contextual features on implementation.

Finally, individual effort in search, planning, and other expenditures of energy proved inconsequential in regard to final implementation outcomes. Access to decision arenas in which choices relating to implementation might have been made was precluded for participants who allocated the largest amounts of time to the policy. Thus, most high energy expenditures by individuals proved to be irrelevant to final outcomes. The process of aggregating individual action into organizational choices also was made problematic by the fluidity of participation in implementation, as no single group or individual remained deeply involved from beginning to end, and as interested participants characteristically wandered in and out of implementation activity.

Significance and Implications

The description of implementation as a loosely-coupled adaptation process has both theoretical and practical significance. Its theoretical significance lies primarily in three challenges: the challenge of better integrating implementation theory and organizational decision theory; the challenge of explaining how the key elements of the adaptation paradigm may become loosely-connected; and, the challenge of tracing the full implications of such a phenomenon. Its practical significance lies primarily in the challenge of devising intervention and management strategies appropriate to a loosely-coupled process. The following observations, drawn from or implied by the data, point to some of the considerations that

probably should be taken into account in meeting these challenges.

Mutual Adaptation, Loose-Coupling, and Implementation Success. It has been suggested in the literature that successful implementation is characterized by a process of mutual adaptation, where both policy (or innovation) and local organization adjust to each other (Berman and McLaughlin, 1975, 1976).

As noted above, the process analyzed was characterized by bi-directional adjustments. Both the policy and local interpretations changed, the former in response to state-level political pressures and inputs from pilot districts, and the latter, after a considerable delay, to deadline pressures that appeared to induce rapid learning.

In one sense, implementation was successful. The deadline was met. The mechanics of functional budgeting were instituted; the state began to receive fiscal reports from the district reflecting the new financial data format.

In another sense, however, the process was not at all successful. The outcome, although acceptable, fell well below the initial aspirations of both state and district participants. The policy had exceptionally little real impact in terms of improving internal district management. The first report deadline was accomplished only by patching already complex and underdocumented computer programs, and by manually compiling the output. A large number of hopes for the policy remained unfulfilled. The process was long (nearly 30 months) and costly, and the results were almost meager by comparison to the effort expended.

Implementation was mutually adaptive, but the process by which adaptation occurred was neither anticipated nor intended by those most closely involved. These features suggest that the definition of success

should go beyond a consideration of outcomes to the quality of the process itself. Hence, attention should be given to strategies that not only promote mutual adaptation but ones which are consciously directed at tightening or maintaining close linkages within the adaptive cycle at both the policy-instituting and policy-implementation levels.

Policy As Symbol. The means by which policy interpretations appeared to be formed and maintained suggested a symbolic process. The research indicated a persistent local bias toward an understanding of the policy as a mandate for instituting program planning and budgeting. This was true even after clarifications were made at the state level which were directed at erasing any PPBS connotations from what was essentially an accounting and state reporting reform project.

It has been noted in the literature that individuals faced with uncertainty assign meaning to observations made but not clearly understood (Edelman, 1964, p. 30). The meaning assigned typically is a condensation of the complexity and ambiguity encountered. Such condensations are in the form of manageable simplicities, symbols, that take on a reality of their own and suggest what would like to be believed more than what is to be believed (Hayakawa, 1942; Edelman, 1964; Duncan, 1969; et.al.).

An important feature of symbols, insofar as implementation is concerned, is that they are comfortable and psychologically satisfying for those who create and hold them. As such, they become potent, semi-permanent features of the belief structure that can be difficult to dislodge. Edelman (1964, p. 31), citing Festinger, et.al. (1956) has noted, "reality can become irrelevant for persons very strongly committed to an emotion-satisfying symbol."

It seems reasonable to suggest that future implementation strategies may need to be aimed at countering or preventing the rise of symbolic attributes within the process.

Symbol as Garbage Can. One way to view a symbol is as a "garbage can" (Cohen, March, and Olsen, 1972; Cohen and March, 1974). The ambiguity surrounding the policy that led to the assignment of PPBS as the primary policy referent also served the purpose of activating and attracting a large number of problems and potential solutions to the implementation process. The symbol "PPBS" summarized and condensed a large number of competing assumptions about the nature of the project, and permitted the hopes and aspirations of nearly everyone involved to be thrown into the arena of implementation for consideration.

The major difficulty with such a phenomenon, in terms of finalizing outcomes, was that implementation became burdened with a large number of problems and solutions brought by participants that proved to be operationally irrelevant. The "garbage," although appearing to be somewhat important for social cohesion and personal identification within the organization, slowed and significantly complicated the process.

Implementation As A Garbage Can Process. Implementation, in the case studied, exhibited the basic features of organized anarchy (Cohen, March, and Olsen, 1972): vague and inconsistent goals surrounded the policy; multiple uncertainties accompanied the solutions brought to the process by participants; and unstable participation was a major feature throughout the life of the project.

Unclear goals, ambiguous technologies, and fluid participation define the basic elements of a garbage can process of choice. In such a process,

outcomes are a result of the contextually dependent flows of problems, solutions, people, and alternative choice opportunities. Important choices typically are made by either a process of "flight," where a decision outcome resolves few problems (since these have left for some other available choice opportunity), or "oversight," where an important choice is made with a minimum of time and energy without significant consideration of important problems to be resolved (March and Olsen, 1976, p. 33-4).

Insofar as the process examined was concerned, the element of "flight" appeared to be a significant factor in explaining outcomes. The large number of problems, relating to the quality of internal district management, that became associated with the policy under the rubric of PPBS were not solved, and little substantive progress was made toward implementing even the most basic policy requirements until these problems left the choice situation.

Change management strategies in situations dominated by garbage can processes are likely to be significantly different from past strategies developed for less contextual processes. Some general rules for managers of organized anarchies have been suggested elsewhere (Cohen and March, 1974). It is reasonable that additional strategies, specifically geared to the management of innovation and change under conditions of ambiguity, may need to be developed and field tested.

Deadline As Attention and Reality Cue. Although a deadline had been a part of the policy since the policy was issued, its influence wasn't felt locally until the gap between specific operational requirements associated with minimum implementation were brought into sharp juxtaposition with the grand, symbolic local interpretations by the stimulus of a meeting for non-pilot districts conducted by the state staff. Part of the early

ineffectiveness of the deadline was in its own ambiguity, but once clarified and noticed, it began to exert two types of influence: it focused new attention on the policy; and, it forced most of the extraneous problems out of the choice.

Both of these phenomena have been documented before (Weiner, 1972, 1976). Some further elaborations were suggested by the data, however. It was noted earlier that duty was an important determinant of attention for the district as a whole. The power of the deadline appeared to be related to this overall mechanism in that the deadline incurred a duty to act that previously had not been a part of the process. Duty focused attention where simple intention had not.

The deadline also initiated a process of "garbage ejection" (Weiner, 1972, 1976). The large range of problems that had become associated with the policy in the absence of deadline pressure began to leave the arena shortly after the deadline started to exert an influence. This process has been explained in the past as the result of energy calculations carried out by participants, whereby available energies are compared with the amount of energy required to solve the problems brought to the choice opportunity. Those problems for which sufficient energy does not exist are ejected (Weiner, 1976, p. 246).

In the case under study, energy calculations were made carefully by the outside consultant who prepared a detailed project plan that would have permitted solution of most of the problems, but such calculations had no impact on the process since the project plan was ignored in the face of new deadline pressures that arose elsewhere within the organization (e.g., budget preparation). Instead, "garbage ejection" seemed to be far more the result of a mental process--a sudden dismantling of the symbolic interpretation of the policy that had persisted for nearly 24 months.

The effect of the deadline was to briefly focus energies and understanding on the specific operational requirements of implementation. Once a determination was made that the basic policy requirements could be met on time, regardless of how inelegantly, the outcome of implementation was established, and the process thenceforth was closed to any further contributions of problems, solutions, hopes, or sub-agendas. From that point on, the policy no longer was significantly ambiguous. And, in the absence of major ambiguity, symbolic interpretations became impossible.

Implications for Policy and Change Management

The research describes a process far more complex and unstable than presently is assumed within the traditional adaptation paradigm. The findings portray implementation as a loosely-coupled process shaped largely by the context in which implementation occurs. The data indicate that the organization adapted to the policy, but not in a manner predicted by current theory based on an assumption of tight linkages between policy attributes and the understanding of those attributes, between understandings and the possibility and motivations for action, and between individual action and the outcomes of implementation.

An understanding of implementation in terms of loose-coupling between elements of the adaptation paradigm suggests several new foci for the development of change management strategies. The process observed, for example, might have been less costly and have yielded better outcomes had state and local level change agents been more aware of the tendencies toward symbolic interpretation and the rules and inherent biases of the participation system within which the policy was to be implemented.

Some Suggested Strategies. The present study focused on only one implementation scenario from among an unknown distribution of scenarios. The following suggestions are made with this important limitation in mind. Policy makers and change agents probably should view them as experimental until further research and testing can be accomplished. They are offered primarily as approximations of what successful future change management strategies may be like.

- Preserve Familiarity. The urge to be strikingly different should be avoided at all costs. Policy makers should resist the temptation to describe innovation as innovation. It should be described in substance and terminology that is routine and familiar. Its more mundane components should almost always be overplayed in relation to its more unique components.

- Mitigate Expectations. Despite the conventional wisdom that great expectations beget great achievements, there is need for far greater humility about the possibilities for truly substantial change in the short-run within complex settings. Hence, a more appropriate alignment of expectations with the high probability of incremental change is in order.

- Factor Requirements. Large projects demand large time commitments. Small projects require proportionately less time. Executives operate in a milieu of time fragmentation where simple, discrete tasks are accomplished before complex, continuous ones. The time sequence of innovation thus is likely to be significantly shortened if it can be synchronized with the time flow of the typical executive day or week.

- Provide Deadlines. Although there are a number of reasons organizational participants attend to affairs, a strong motivator, as suggested by the data, is duty. Hence, in line with the need to factor out sub-objectives in more concise segments, is the concomitant need to attach deadline conditions to factored requirements. Busy participants notice deadlines. Deadlines clear a choice arena of unnecessary problems, solutions, and people. Hence, they are potentially extraordinarily useful measures of control over the change process as a whole. It is suggested that, rather than single deadlines attached to entire projects, a number of intermediate deadlines, each successively more coercive, should be applied.

NOTES

[1]The full results of the study may be found in Paul Berman and Milbrey Wallin McLaughlin, Federal Programs Supporting Educational Change. Santa Monica: Rand Corporation, R-1589/HEW, 1975.

[2]Ibid.

[3]The policy implementation framework analyzed differs in one significant respect from others reported elsewhere in that the policy represented an authoritative command that required some organizational response under deadline conditions. In such a framework, it might be imagined that the linkages within the adaptation process would be far tighter than in a process involving the voluntary adoption and implementation of an innovation (except perhaps in the case where federal or state money is an adequate surrogate for authoritative coercion). Thus, the present study provides a more rigorous test of the concept of loose-coupling than the case of laissez-faire innovation following macro-level policy initiatives.

[4]Others have studied innovation and change from an independent-dependent stance (Zaltman, Duncan, Holbek, 1973; Berman and McLaughlin, 1976; Hage and Aiken, 1970) but, by and large, have not portrayed the phenomenon as a longitudinal, behavioral process, even though often discussing it as such. It is suggested that a simple independent-dependent variable approach often runs into the serious validity problem of discovering statistically significant relationships only for a given slice of time during which variables were measured, and moreover, that these particular relationships may have little relevance within an ongoing process, where what will be important at any given moment is largely a function of everything else going on in the context.

[5]Those interviewed by title, included: at the district level the chancellor, vice-chancellors of business and educational services, director of fiscal services, internal auditor, controller, and data processing manager, and at the college level, the five presidents, deans, and business managers.

[6]Seven data collection days, instead of the originally planned nine (three per session), were scheduled. It was decided to attenuate the final round to one day in the hope of increasing the participation of college presidents and district officers, which had fallen off during the last two days of the February round. This strategy worked well as all but one president (whose college was in the midst of being phased out) participated.

[7]The research revealed several other forms of ambiguity. These have been omitted from the present paper for sake of overall brevity. For example, the case study suggested other uncertainties regarding project deadlines (ambiguity of time), project priority (ambiguity of importance), project responsibility locally and at the state level (ambiguity of responsibility), and overall project viability (ambiguity of intention).

[8]"Organizational Memorygram" is a term invented to fit the data displayed in Figure 1. Each document generated locally, relating to the state mandate, was content analyzed and resultant word/word cluster frequency tabulations were plotted chronologically, document by document. The result was a pictoral representation of longitudinal language activity for the local organization during the implementation period.

[9]In terms of relative rankings, the state policy appeared to trade plans with the "need for MIS/FIS" issue. This switch of positions coincided with the redefinition of the policy from a broad-based mandate involving "PPBS" (including a management information system component) to a much narrower reporting-account coding policy. As mentioned below, the policy in its early, most ambiguous, stages appeared to be a "garbage can" (Cohen, March, and Olsen, 1972) for local personal agendas that later were ejected from the choice as the ambiguity surrounding it attenuated.

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